



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,268	03/23/2006	Kang Soo Seo	46500-000380/US	3026
30593	7590	03/31/2009	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				DAZENSKI, MARC A
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
03/31/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,268	SEO ET AL.	
	Examiner	Art Unit	
	MARC DAZENSKI	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 March 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 March 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3-23-2006</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Claims 23-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 23 is drawn to functional descriptive material recorded on a recording medium. Normally, the claim would be statutory. However, the specification, at page 8 defines the claimed computer readable medium as encompassing statutory media such as a “optical disc,” “blu-ray disc,” etc. as well as **non-statutory** subject matter such as “all types of medium that can record or have already recorded data and broadly includes all types of medium” (wherein

because a signal can be interpreted as a medium that already has recorded data, the claim can be read as comprising non-statutory subject matter).

A “signal” embodying functional descriptive material is neither a process nor a product (i.e., a tangible “thing”) and therefore does not fall within one of the four statutory classes of § 101. Rather, “signal” is a form of energy, in the absence of any physical structure or tangible material.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, and 8-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsumagari et al (US PgPub 2004/0126095), hereinafter referred to as Tsumagari.

Regarding **claim 1**, Tsumagari discloses an optical disk apparatus and optical disk processing method and optical disk. Further, Tsumagari discloses an optical disk apparatus that acquires and reproduces ENAV contents in addition to reproducing ENAV contents included in a disk in addition to the existing DVD contents, which reads on the claimed, “in reproducing a set of external input data and a set of internal

recording medium data, a reproducing method of a recording medium reproducing device," as disclosed at paragraph [0043]; the method comprising:

switching and selecting the video image output of the DVD video reproducing portion (R) and/or the video image output of the ENAV reproducing portion (E) in accordance with an output method selected by a user from a user operating portion (53), which reads on the claimed, "selecting at least one of the set of external input data and the set of internal recording medium data," as disclosed at paragraph [0096];

element decoder (58) which decodes such data as voice, still picture, text, or motion picture included in the ENAV contents, and then feeds this data to the video image and/or voice output control portion (59), which reads on the claimed, "executing at least one reproducing engine so as to reproduce the selected data in accordance with an attribute of the selected data," as disclosed at paragraph [0088]; and,

the video image output control portion (59) carries out the outputting of a video image in a full video mode, a full ENAV mode, or a mixed frame mode, which reads on the claimed, "displaying the data reproduced through the reproducing engine," as disclosed at paragraphs [0092]-[0097].

Regarding **claim 2**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, Tsumagari discloses the optical disk is an enhanced DVD video disk comprising DVD-Video contents in addition to ENAV contents, as well as the ENAV contents being acquired from a server via the internet in addition to being present on the optical disk, which reads on the claimed, "wherein each of the external input data and

the internal recording medium data comprises at least one set of AV stream and one set of enhanced data," as disclosed at paragraphs [0033], [0043] and exhibited in figure 2.

Regarding **claim 3**, Tsumagari discloses everything claimed as applied above (see claim 2). In addition, Tsumagari discloses DVD reproducing portion (R) for reproducing DVD video contents as well as ENAV reproducing portion (E) for reproducing ENAV contents, which reads on the claimed, "wherein the reproducing engine includes a reproducing engine for AV streams and a reproducing engine for enhanced data," as disclosed at paragraphs [0051] and [0055] as well as exhibited in figure 1.

Regarding **claim 4**, Tsumagari discloses everything claimed as applied above (see claim 2). Further, Tsumagari discloses the ENAV contents are described using a markup or script language such as Javascript, which reads on the claimed, "wherein the enhanced data is provided as a Java program," as disclosed at paragraph [0036].

Regarding **claim 5**, Tsumagari discloses everything claimed as applied above (see claim 2). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 4 above.

Regarding **claim 6**, Tsumagari discloses everything claimed as applied above (see claim 4). Further, Tsumagari discloses ENAV interface which outputs a "video and/or voice output control signal" included in reproduction control information of the ENAV contents, which includes a command for switching the contents for reproduction of the DVD video or ENAV contents, which reads on the claimed, "wherein the Java

program is able to control AV stream reproduction," as disclosed at paragraphs [0083]-[0085] and [0092].

Regarding **claim 8**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, Tsumagari discloses for reproduction control information included in ENAV contents, there are user specific commands or variables associated with reproduction of the DVD video disk and/or ENAV contents, as well as outputting a "DVD event signal" based on an event such as a menu call during DVD reproduction, which reads on the claimed, "wherein a control command (Call API) for executing each of the at least one reproducing engine is included separately," as disclosed at paragraphs [0053] and [0084].

Regarding **claim 9**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, Tsumagari discloses DVD video reproduction control portion (52) and ENAV reproducing portion (E) can be a microcomputer and/or firmware, which reads on the claimed, "wherein the reproducing engine is represented as a software," as disclosed at paragraph [0048].

Regarding **claim 10**, Tsumagari discloses everything claimed as applied above (see claim 1). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 9 above.

Regarding **claim 11**, Tsumagari discloses everything claimed as applied above (see claim 3). Further, Tsumagari discloses DVD reproducing portion (R) which reproduces the DVD video contents as well as internet communication portion (62) which further has an internet connection function to download ENAV contents which can

be displayed along with the DVD video contents, which reads on the claimed, "wherein the reproducing engine includes an AV player for executing the AV stream, and a browser for executing the enhanced data," as disclosed at paragraphs [0051], [0106]-[0109], and [0156]-[0157] and exhibited in figures 9A-9D and 10.

Regarding **claim 12**, Tsumagari discloses everything claimed as applied above (see claim 11). Further, Tsumagari discloses DVD reproducing portion (R) for reproducing DVD video contents as well as ENAV reproducing portion (E) for reproducing ENAV contents, the ENAV contents being reproduced in addition to or instead of web contents downloaded from web content distribution server (S), which reads on the claimed, "wherein each of the AV player and the browser separately includes an AV player for digital broadcasting, an AV player for reproducing an internal recording medium, a browser for digital broadcasting, and a browser for reproducing an internal recording medium, respectively," as disclosed at paragraphs [0051], [0053], [0148], and [0156].

Regarding **claim 13**, Tsumagari discloses everything claimed as applied above (see claim 12). Further, Tsumagari discloses user event control portion (54) which is configured so as to receive a user event corresponding to the user operation (e.g, menu call, title jump, or the like) thereby generating user events (a)-(c), which are outputted to both of the DVD video reproducing portion (R) and the ENAV interface portion (55) at the same time, which reads on the claimed, "wherein a control command (Call API) controls each of the at least one reproducing engine, and wherein the reproducing engine executed by the control command (Call API) includes the AV player for digital

broadcasting and the browser for reproducing the internal recording medium," as disclosed at paragraphs [0060]-[0069].

Regarding **claim 14**, Tsumagari discloses everything claimed as applied above (see claim 13). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 12 above.

Regarding **claim 15**, Tsumagari discloses everything claimed as applied above (see claim 14). Further, Tsumagari discloses the web contents from web content distribution server (S) are used to specify the DVD video disk and/or enhanced DVD video disk inserted into the optical disk apparatus in order to distribute the correct ENAV contents, which reads on the claimed, "wherein the enhanced data being reproduced from the browser for reproducing the internal recording medium is provided by an author of the digital broadcasting," as disclosed at paragraphs [0174]-[0175] (wherein because the titles used to specify the correct ENAV contents are pre-recorded onto the DVD, they must have been created by an author of the digital broadcasting).

Regarding **claim 16**, Tsumagari discloses everything claimed as applied above (see claim 12). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 13 above.

Regarding **claim 17**, Tsumagari discloses everything claimed as applied above (see claim 12). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 13 above.

Regarding **claim 18**, Tsumagari discloses everything claimed as applied above (see claim 12). Further, the limitations of the claim are rejected in view of the explanation set forth in claim 13 above.

Regarding **claim 19**, Tsumagari discloses an optical disk apparatus and optical disk processing method and optical disk. Further, Tsumagari discloses an optical disk apparatus that acquires and reproduces ENAV contents in addition to reproducing ENAV contents included in a disk in addition to the existing DVD contents, which reads on the claimed, "in reproducing a set of external input data and a set of internal recording medium data, a reproducing method of a recording medium reproducing device," as disclosed at paragraph [0043]; the method comprising:

switching and selecting the video image output of the DVD video reproducing portion (R) and/or the video image output of the ENAV reproducing portion (E) in accordance with an output method selected by a user from a user operating portion (53), which reads on the claimed, "a selection unit selecting at least one of the set of the external input data and the internal recording medium data as input data," as disclosed at paragraph [0096];

element decoder (58) which decodes such data as voice, still picture, text, or motion picture included in the ENAV contents, and then feeds this data to the video image and/or voice output control portion (59), which reads on the claimed, "at least one reproducing engine reproducing the selected data in accordance with an attribute of the selected data," as disclosed at paragraph [0088]; and,

user event control portion (54) which is configured so as to receive a user event corresponding to the user operation (e.g., menu call, title jump, or the like) thereby generating user events (a)-(c), which are outputted to both of the DVD video reproducing portion (R) and the ENAV interface portion (55) at the same time, as well as the video image output control portion (59) carries out the outputting of a video image in a full video mode, a full ENAV mode, or a mixed frame mode, which reads on the claimed, "a controller transmitting a control command to the selection unit, so as to select the input signal, when a desired display mode is decided, and transmitting another control command so as to execute a reproducing engine suitable for the decided display mode among the at least one reproducing engine," as disclosed at paragraphs [0060]-[0069] and [0092]-[0097].

Regarding **claim 20**, Tsumagari discloses an optical disk apparatus and optical disk processing method and optical disk. Further, Tsumagari discloses an optical disk apparatus that acquires and reproduces ENAV contents in addition to reproducing ENAV contents included in a disk in addition to the existing DVD contents, which reads on the claimed, "in a method of controlling display of a set of external input data and a set of internal recording medium data, a display control method within a recording medium reproducing device," as disclosed at paragraph [0043]; the method comprising:

element decoder (58) which decodes such data as voice, still picture, text, or motion picture included in the ENAV contents, and then feeds this data to the video image and/or voice output control portion (59), which reads on the claimed, "providing a

plurality of reproducing engines corresponding to each attribute of a set of data being reproduced," as disclosed at paragraph [0088]; and,

when an operation where contents are changed or window size is changed, the operation is fed as the user event signal (c) from the user event control portion (54) to the ENAV interface portion (55), where it is then converted into an ENAV event where it is interpreted by ENAV interpreting portion (56) into a "video image and/or voice output control signal" for switching a video image and/or voice output from the DVD video reproducing portion (R) and a video image and/or voice output from the ENAV reproducing portion (E), which reads on the claimed, "when a desired display mode is decided, generating at least one control command (Call API) so as to execute a reproducing engine suitable for the decided display mode among the at least one reproducing engine," as disclosed at paragraphs [0072], and [0077]-[0079].

Regarding **claim 21**, Tsumagari discloses an optical disk apparatus and optical disk processing method and optical disk. Further, Tsumagari discloses an optical disk apparatus that acquires and reproduces ENAV contents in addition to reproducing ENAV contents included in a disk in addition to the existing DVD contents, the apparatus including element decoder (58) which decodes such data as voice, still picture, text, or motion picture included in the ENAV contents, and then feeds this data to the video image and/or voice output control portion (59), which reads on the claimed, "in a recording medium reproducing device provided with a plurality of reproducing engines corresponding to each attribute of a set of data being reproduced, so as to control display of the data being reproduced, a display control method within a recording

medium reproducing device," as disclosed at paragraphs [0043] and [0088]; the method comprising:

a start-up file on the disk is read, and reproduction of the ENAV contents on the disk is carried out by accessing web content distribution server (S) which is referred to by working of a user event control portion (54), which reads on the claimed, "providing a user-selectable display mode, when the recording medium is loaded," and,

when an operation where contents are changed or window size is changed, the operation is fed as the user event signal (c) from the user event control portion (54) to the ENAV interface portion (55), where it is then converted into an ENAV event where it is interpreted by ENAV interpreting portion (56) into a "video image and/or voice output control signal" for switching a video image and/or voice output from the DVD video reproducing portion (R) and a video image and/or voice output from the ENAV reproducing portion (E), which reads on the claimed, "when executing a specific display mode in accordance with a user-selection, generating at least one control command (Call API) so as to execute a reproducing engine suitable for the user-selected display mode among the at least one reproducing engine," as disclosed at paragraphs [0072], and [0077]-[0079].

Regarding **claim 22**, the limitations of the claim are rejected in view of the explanation set forth in claim 21 above.

Regarding **claim 23**, Tsumagari discloses an optical disk apparatus and optical disk processing method and optical disk. Further, Tsumagari discloses DVD video disk (d) which includes a DVD video area (13) which contains video content such as video

title sets as well as video manager VMG12 which includes VMG menu data VMGM_VOBS and VTS menu data VTSM_VOBS, which reads on the claimed, "in a recording medium including an area for recording main data and an area for recording menu information corresponding to the main data," as disclosed at paragraphs [0029], [0031]-[0032] and exhibited in figure 2; the medium comprising:

ENAV contents which include information for controlling reproduction of the DVD video contents such as display method the display methods being a full video mode, a full ENAV mode, or a mixed frame mode, which reads on the claimed, "a display menu recorded in the menu information, so as to enable a user to select a display mode for a set of external input data and also for the main data recorded in the recording medium," as disclosed at paragraphs [0036], [0092]-[0097].

Regarding **claim 24**, Tsumagari discloses everything claimed as applied above (see claim 23). Further, the limitations of the claim are rejected in view of the explanation set forth above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsumagari et al (US PgPub 2004/0126095), hereinafter referred to as Tsumagari, in view of Chatterton (US Patent 7,116,894), hereinafter referred to as Chatterton, further in view of Mekenkamp et al US PgPub 2004/0091249), hereinafter referred to as Mekenkamp.

Regarding **claim 7**, Tsumagari discloses everything claimed as applied above (see claim 1). However, Tsuamagari fails to disclose wherein the external input data is a digital broadcast signal. The examiner maintains that it was well known in the art to include the missing limitations, as taught by Chatterton.

In a similar field of endeavor, Chatterton discloses a system and method for digital multimedia stream conversion. Further, Chatterton discloses a digital media server which receives multimedia from broadcast communication channels (130) including digital/analog cable and satellite, which reads on the claimed, “wherein the external input data is a digital broadcast signal,” as disclosed at column 3, lines 63-67.

Therefore, it would have been obvious to modify the optical disk apparatus and optical disk processing method and optical disk of Tsumagari to include a digital media server which receives multimedia from broadcast communication channels (130) including digital cable, as taught by Chatterton, for the purpose of providing multimedia content from a variety of external sources.

The combination of Tsumagari and Chatterton fails to disclose the internal recording medium data is a signal reproduced from a read-only blu-ray disc (BD-ROM).

The examiner maintains it was well known in the art to include the missing limitations, as taught by Mekenkamp.

In a similar field of endeavor, Mekenkamp discloses a continue recording channel feature for personal video recorder. Further, Mekenkamp discloses a PVR comprising hard drive (80) which may be an optical data storage device or drive such as a blue-laser-based optical disc system (commonly known as Blu-Ray), which reads on the claimed, "the internal recording medium data is a signal reproduced from a read-only blu-ray disc (BD-ROM)" as disclosed at paragraphs [0020]-[0021].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Tsumagari and Chatterton to include a PVR comprising hard drive (80) which may be an optical data storage device or drive such as a blue-laser-based optical disc system (commonly known as Blu-Ray), as taught by Mekenkamp, for the purpose of providing a user with main data that is of a higher visual quality than that of a standard DVD disc.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsumagari et al (US PgPub 2004/0126095), hereinafter referred to as Tsumagari, in view of Mekenkamp et al US PgPub 2004/0091249), hereinafter referred to as Mekenkamp.

Regarding **claim 25**, Tsumagari discloses everything claimed as applied above (see claim 23). However, Tsumagari fails to disclose wherein the recording medium is a read-only blu-ray disc (BD-ROM). The examiner maintains it was well known in the art to include the missing limitations, as taught by Mekenkamp.

In a similar field of endeavor, Mekenkamp discloses a continue recording channel feature for personal video recorder. Further, Mekenkamp discloses a PVR comprising hard drive (80) which may be an optical data storage device or drive such as a blue-laser-based optical disc system (commonly known as Blu-Ray), which reads on the claimed, "wherein the recording medium is a read-only blu-ray disc (BD-ROM)," as disclosed at paragraphs [0020]-[0021].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the optical disk apparatus and optical disk processing method and optical disk of Tsumagari to include a PVR comprising hard drive (80) which may be an optical data storage device or drive such as a blue-laser-based optical disc system (commonly known as Blu-Ray), as taught by Mekenkamp, for the purpose of providing a user with main data that is of a higher visual quality than that of a standard DVD disc.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC DAZENSKI whose telephone number is (571)270-5577. The examiner can normally be reached on M-F, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571)272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
Supervisory Patent Examiner, Art Unit 2621

/MARC DAZENSKI/
Examiner, Art Unit 2621